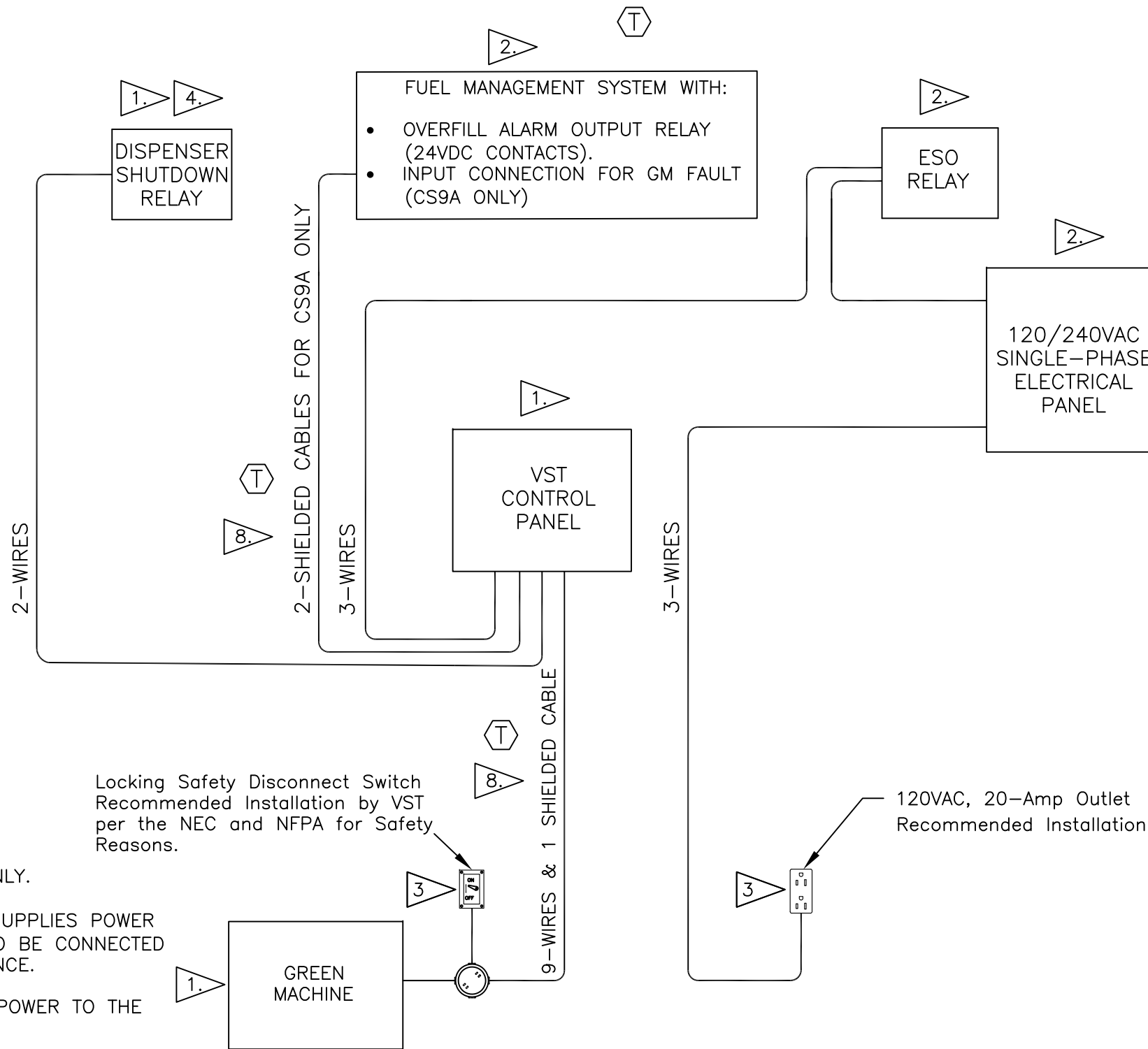


DRAWING LIST

SHT	DESCRIPTION
1	TITLE SHEET.
2	ELECTRICAL OVERVIEW – ESO RELAY WIRING.
3	CONTROL PANEL FIELD WIRING – ESO RELAY WIRING.
4	CONTROL PANEL FIELD WIRING – COMPONENT CONNECTIONS.
5	DISPENSER SHUTDOWN RELAY CIRCUIT COMPONENTS.
6	DISPENSER SHUTDOWN RELAY CIRCUIT WIRING DIAGRAM.
7	GREEN MACHINE JUNCTION BOX FIELD WIRING DIAGRAM.
8	PRESSURE SENSOR WIRING DIAGRAM.
9	VACUUM PUMP MOTOR WIRING DIAGRAM.
10	WIRING CONNECTIONS.

ECN	DESCRIPTION	RELEASED
2564	PER EC	08/26/24

<table border="1"> <tr> <td>DRAWN BY</td> <td>DATE</td> </tr> <tr> <td>P. ELAM</td> <td>08/20/24</td> </tr> <tr> <td>CHECKED BY</td> <td>DATE</td> </tr> <tr> <td>R. GRANTHAM</td> <td>08/23/24</td> </tr> <tr> <td>APPROVED BY</td> <td>DATE</td> </tr> <tr> <td>G. WALKER</td> <td>08/23/24</td> </tr> </table>	DRAWN BY	DATE	P. ELAM	08/20/24	CHECKED BY	DATE	R. GRANTHAM	08/23/24	APPROVED BY	DATE	G. WALKER	08/23/24	<table border="1"> <tr> <td>TITLE</td> <td>DWG NO.</td> <td>REV</td> </tr> <tr> <td>INSTALLATION DRAWING GREEN MACHINE – GEN 3</td> <td>5790-002</td> <td>T</td> </tr> </table>	TITLE	DWG NO.	REV	INSTALLATION DRAWING GREEN MACHINE – GEN 3	5790-002	T
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NOTES:

- 1. ITEM(S) ARE SUPPLIED BY VST, INC.
- 2. ITEM(S) ARE EXISTING AT GDF SITE LOCATION.
- 3. ITEM(S) ARE SUPPLIED BY CONTRACTOR.
- 4. ITEM IS FOR CS8A AND CS12A GREEN MACHINES ONLY.
- 5. THE STATION EMERGENCY SHUT-OFF (ESO) RELAY SUPPLIES POWER TO THE VST CONTROL PANEL 3-WIRES). GROUND TO BE CONNECTED AT MAIN PANEL TO MINIMIZE ELECTRICAL INTERFERENCE.
- 6. THE ESO RELAY, WHEN ACTIVATED, WILL TURN OFF POWER TO THE VST CONTROL PANEL.
- 7. THE OVERFILL OUTPUT RELAY WILL TURN OFF THE GREEN MACHINE WHEN AN OVERFILL OCCURS (2-WIRES).
- 8. THE SHIELDED CABLE IS A BELDEN 88760 (OR EQUIVALENT) 18AWG STRANDED (19X30) TC CONDUCTORS, PLENUM, FEP INSULATION, TWISTED PAIR, OVERALL BELDFOIL SHIELD (100% COVERAGE), 20AWG STRANDED TC DRAIN WIRE, FEP JACKET.

Locking Safety Disconnect Switch Recommended Installation by VST per the NEC and NFPA for Safety Reasons.

120VAC, 20-Amp Outlet Recommended Installation by VST for Testing

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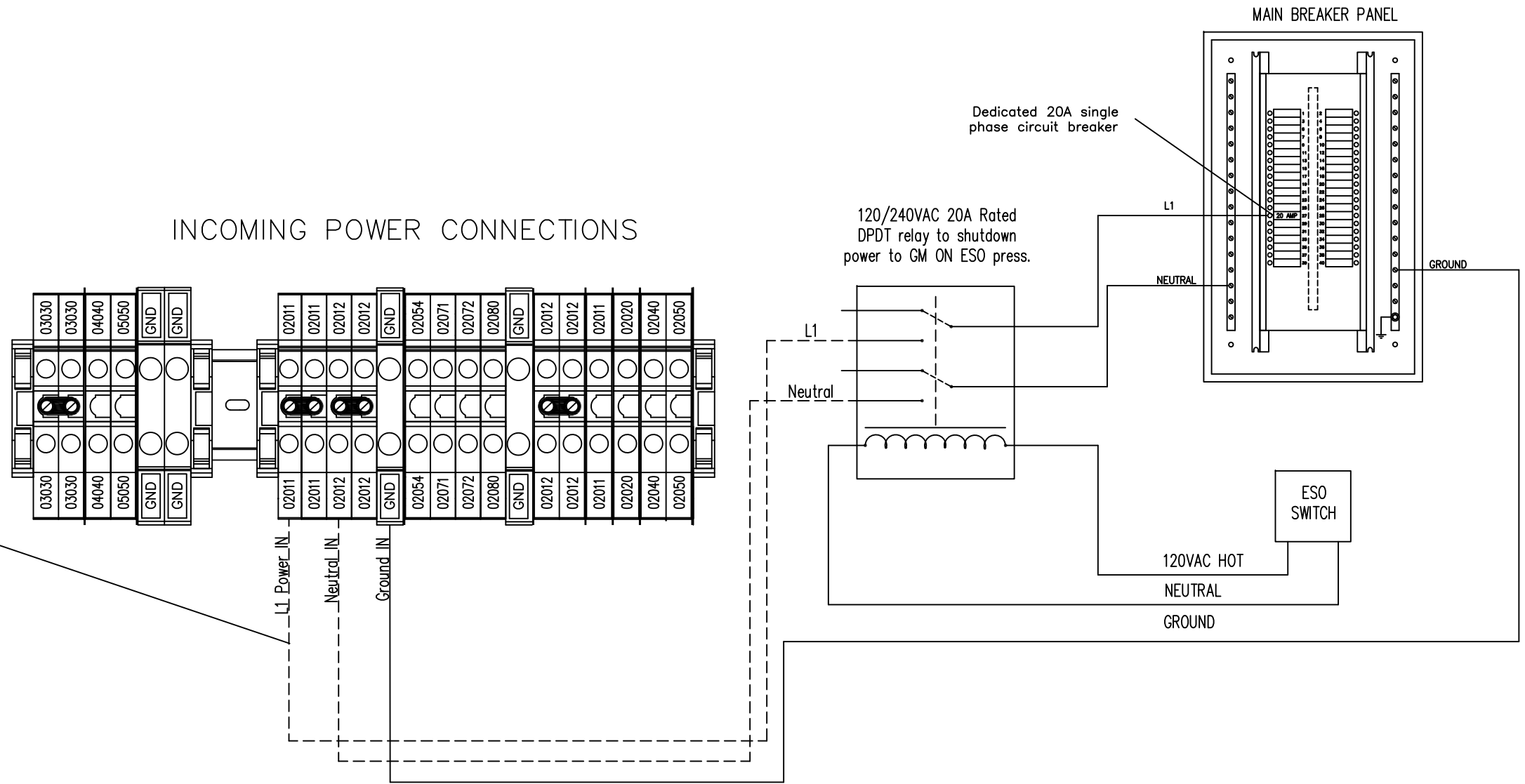
TITLE INSTALLATION DRAWING GREEN MACHINE - GEN 3	DWG NO. 5790-002
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BOTTOM OF PANEL FOR  
FIELD WIRING CONNECTIONS

FIELD WIRING FROM THE MAIN  
ELECTRICAL DISTRIBUTION PANEL TO THE  
CONTROL PANEL TERMINAL BLOCKS

INCOMING POWER CONNECTIONS



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TITLE  
INSTALLATION DRAWING  
GREEN MACHINE - GEN 3

VST Vapor Systems Technologies, Inc.  
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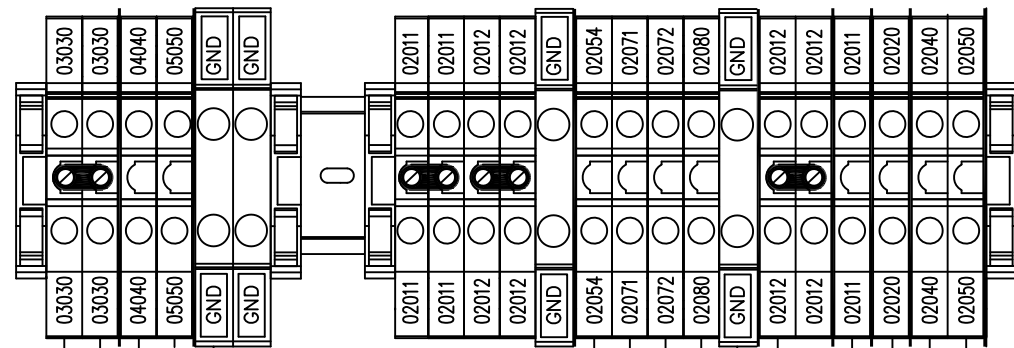
DWG NO. 5790-002	REV T
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ECN	DESCRIPTION	RELEASED
2564	PER EC	08/26/24

# CONTROL PANEL CONNECTIONS

# CONNECTING



- \* GREEN MACHINE INTERNAL JUNCTION BOX
- \* PRESSURE SENSOR
- \* SAFETY DISCONNECT SWITCH
- \* OVERFILL ALARM RELAY
- \* 72-HOUR STATION SHUTDOWN ALARM RELAY
- \* GM FAULT

FIELD WIRING FROM THE CONTROL PANEL TERMINAL BLOCKS

INSIDE THE DATA HUT FIELD WIRING CONNECTIONS

## AT THE GREEN MACHINE FIELD WIRING CONNECTIONS

## GM FAULT WIRING CONNECTIONS FOR TLS (CS9A ONLY)

PRESSURE SENSOR CABLE

SHIELDED CABLE  
GROUND SHIELD AT GM CONTROL PANEL SIDE

24VDC (+) 03030

SHIELD GROUND

4-20 mA SIGNAL (IN) 04040

VAC PUMP MOTOR (120VAC HOT) 02054

V1 VALVES (120VAC HOT) 02071

V2 VALVES (120VAC HOT) 02072

V5 VALVE (120VAC HOT) 02080

GROUND

NEUTRAL 02012

GREEN MACHINE  
INTERNAL JUNCTION BOX

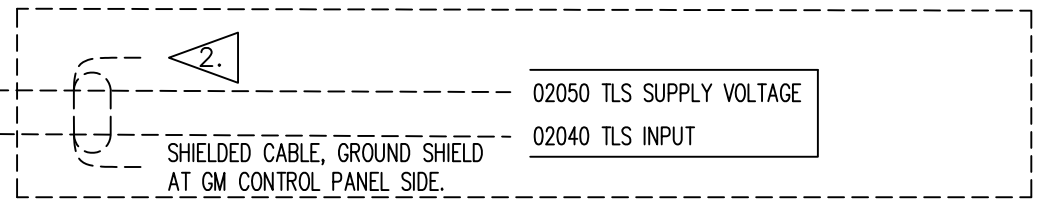
SAFETY DISCONNECT  
ON/OFF SWITCH  
(LOCATED AT GM)

120VAC HOT 02011

120VAC SWITCH LEG 02020

GROUND

N.C.



- OR -

## DISPENSER SHUTDOWN RELAY WIRING (CS8A & CS12A ONLY)

120VAC EXTERNAL POWER

SHUTDOWN ALARM NEUTRAL

SHUTDOWN ALARM 02040

SHIELDED CABLE, GROUND SHIELD  
AT GM CONTROL PANEL SIDE.

Dispenser  
Shutdown Relay

SUBMERSIBLE TURBINE  
PUMPS DISPENSER  
SHUTDOWN RELAY  
COIL (HOOK RELAY)

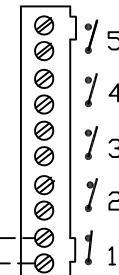
## OVERFILL FIELD WIRING CONNECTIONS

Maximum Relay Contact Rating:  
120/240VAC 5A, 30VDC 5A  
Fuse Ratings 5A, 250 VAC,  
Type T (Slo-Blo)

OVERFILL SIGNAL 05050  
OVERFILL 24VDC (+) 03030

OVERFILL SIGNAL 05050

OVERFILL 24VDC (+) 03030



OVERFILL ALARM RELAY, TYPE 1,  
TLS-450 Plus

C  
NO OVERFILL ALARM RELAY, TYPE 2,  
TLS-350 OR EQUIVLENT 4-RELAY MODULE  
NC

### NOTES:

1. ITEM IS FOR CS8A and CS12A GREEN MACHINES ONLY.

2. ITEM IS FOR CS9A ONLY.

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TITLE  
INSTALLATION DRAWING  
GREEN MACHINE - GEN 3

DWG NO. 5790-002	REV T
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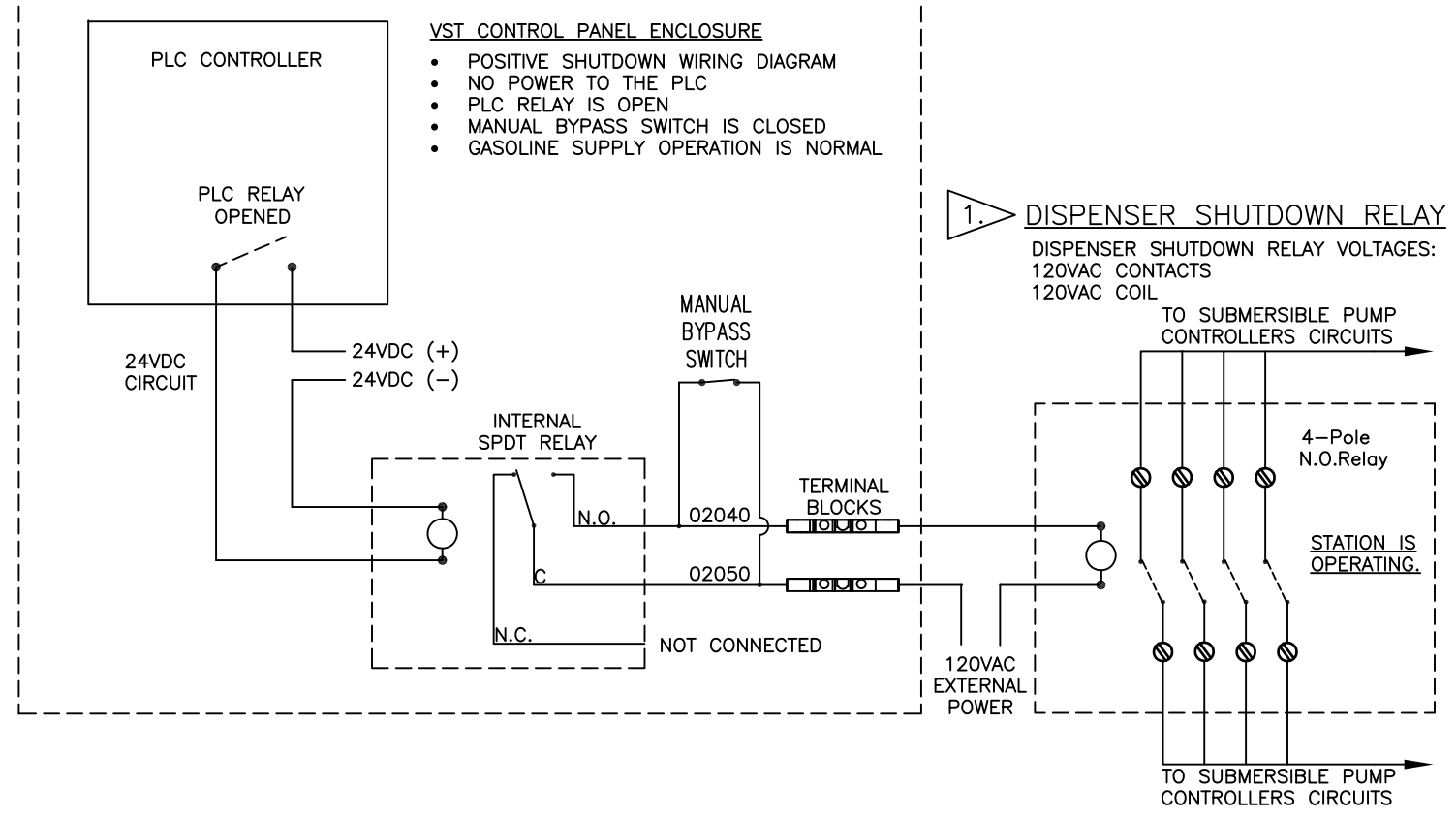
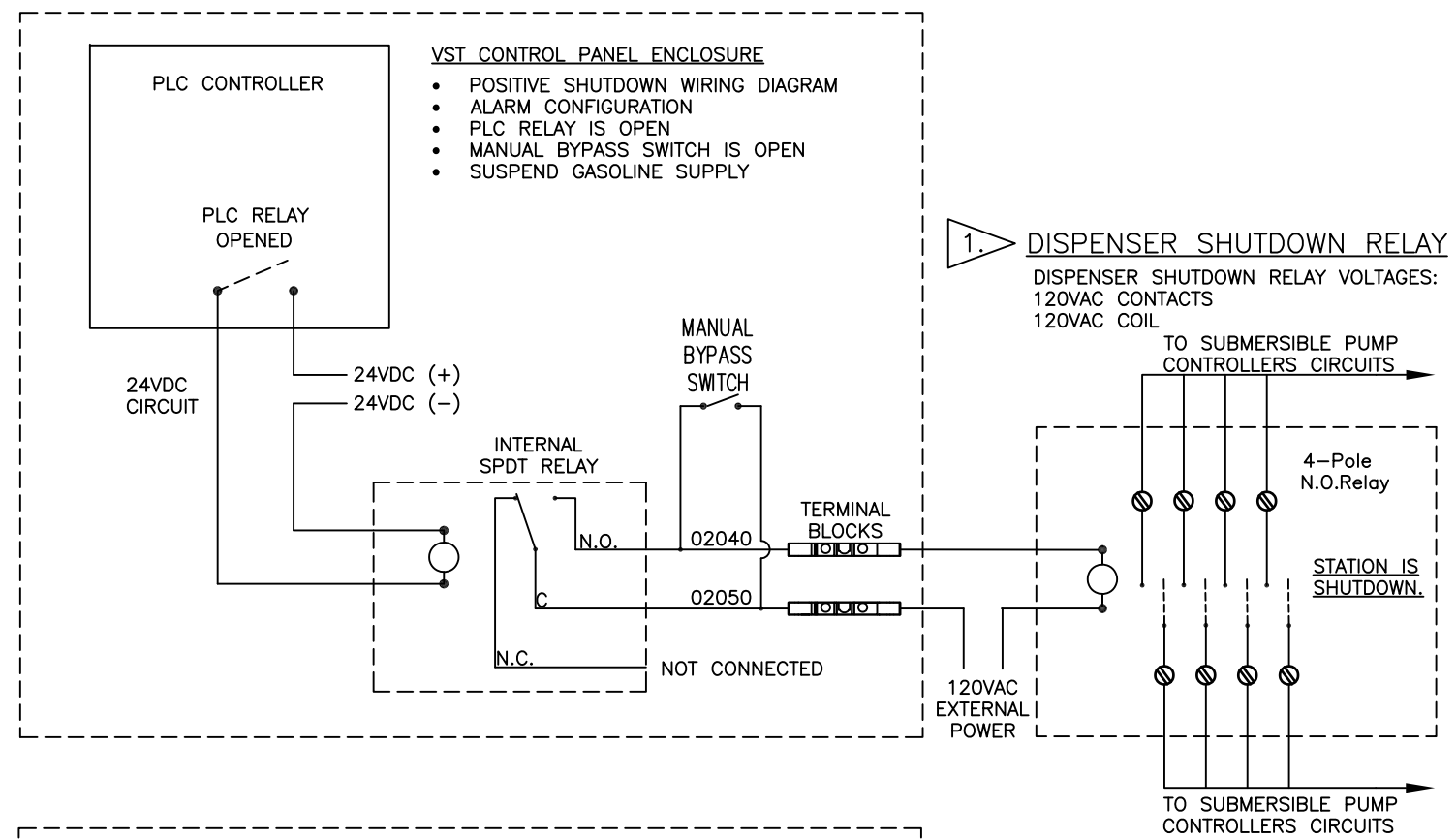
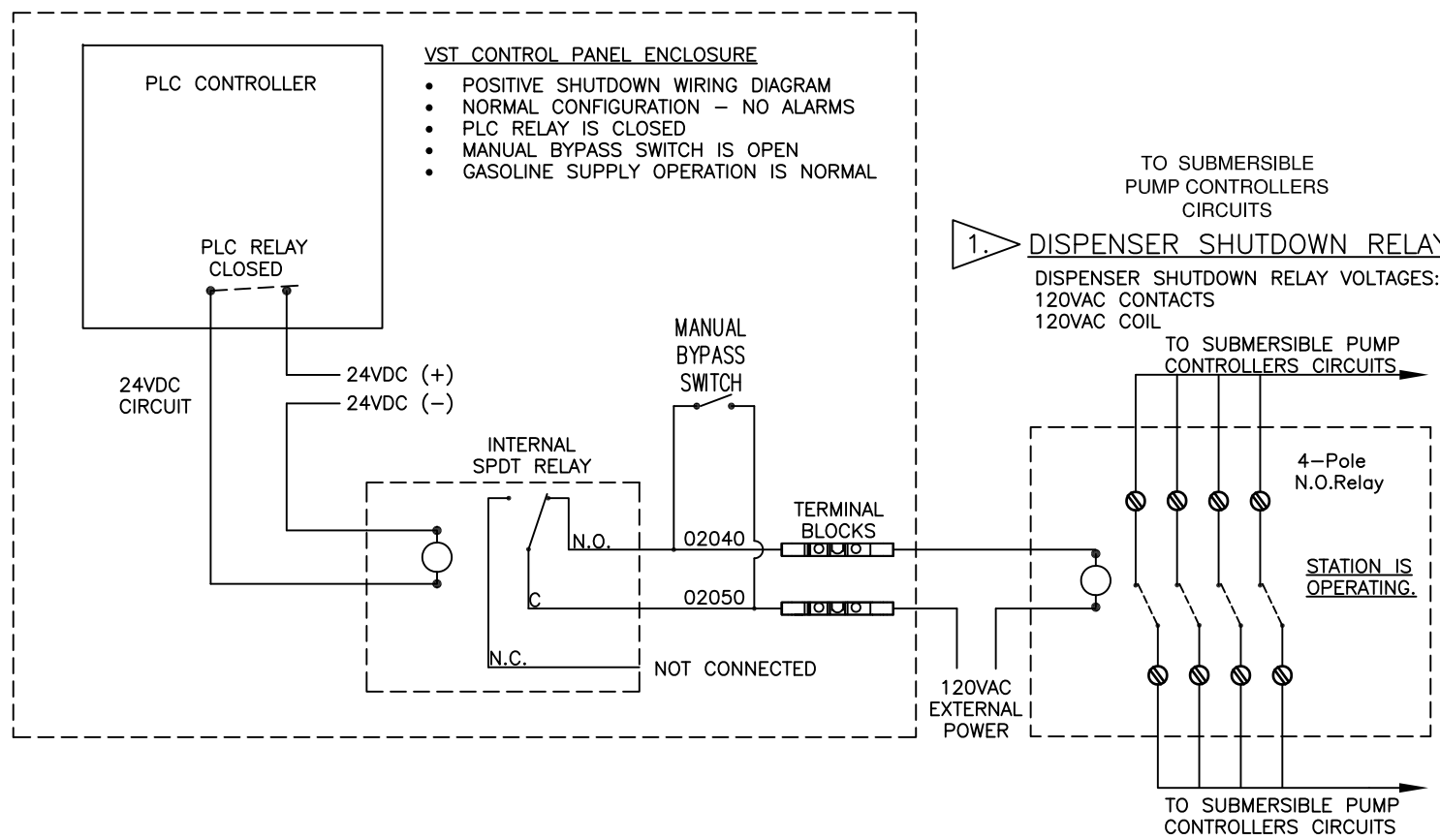
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SHEET NO.  
4 OF 10





Positive shutdown wiring diagram. Turning OFF power to the VST Control Panel will disable fueling. Splice into the dispenser shutoff signal after all other wiring to the vst control panel is complete and is fully functional. test the dispenser shutoff relay control before connecting dispenser shutoff wires to the dispenser shutoff relay.

if the VST Control Panel loses power, the bypass switch can closed to keep the station operational.

NOTES:  
 1. ITEM IS FOR CS8A AND CS12A GREEN MACHINES ONLY.

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DRAWN BY P. ELAM	DATE 08/20/24	TITLE <b>INSTALLATION DRAWING GREEN MACHINE – GEN 3</b>	DWG NO. <b>5790-002</b>	REV <b>T</b>
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FILENAME: 5790-002 TITLE: GREEN MACHINE – GEN 3 SCALE: N/A

TO THE VACUUM PUMP MOTOR  
UL APPROVED CLASS 1, DIV. II  
120VAC, 1Ø, 60Hz, 1/2Hp

V1 VALVE  
120VAC

V2 VALVE  
120VAC

V1 VALVE  
120VAC

V2 VALVE  
120VAC

V5 VALVE  
120VAC

PRESSURE  
SENSOR  
24VDC

TO THE PRESSURE SENSOR:  
UL APPROVED  
24VDC, 4-20 mA OUTPUT

CORDGRIP FITTING (TYP.)

UL APPROVED METAL JUNCTION BOX (J-BOX)

EQUIPMENT GROUND

TERMINAL BLOCK  
JUMPER (TYP.)

3/4" LIQUIDTIGHT CONDUIT FROM  
THE 3/4" CONDUIT FITTING ON THE  
GREEN MACHINE INLET CONNECTION

CONNECTION TO THE VST CONTROL PANEL

02054 VACUUM PUMP MOTOR POWER (L1)  
02071 V1 CONTROL VALVES POWER (L2)  
02072 V2 CONTROL VALVES POWER (L3)  
02080 V5 CONTROL VALVE POWER (L4)  
02012 NEUTRAL  
GND GROUND 1.

PRESSURE SENSOR CABLE:

03030 SHIELD GROUND 5.  
24VDC (+)  
04040 4-20 mA SIGNAL (IN)

2. 2 CONDUCTOR, 18AWG, TWISTED PAIR, SHIELDED.  
(SEE THE INSTALLATION MANUAL FOR DETAILS)

1. ALL CONNECTING WIRES AND THE PS  
SENSOR CABLE ARE PROVIDED BY THE  
CONTRACTOR.

2. BELDEN 88760 (OR EQUIVALENT).

SEE THE GREEN MACHINE INSTALLATION  
AND MAINTENANCE MANUAL FOR DETAILS.

ALL FIELD WIRING MUST MEET THE NEC  
AND NFPA CODE REQUIREMENTS.

5. GROUND SHIELD DRAIN WIRE AT GM  
CONTROL PANEL.

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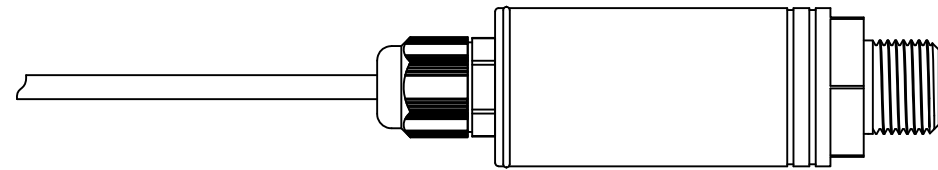
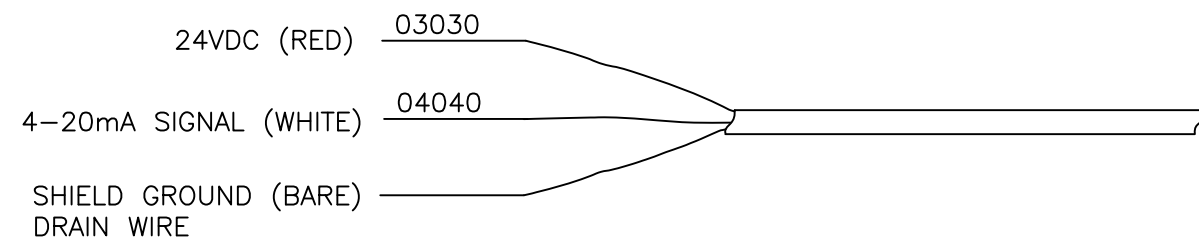
TITLE  
INSTALLATION DRAWING  
GREEN MACHINE - GEN 3

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DWG NO. 5790-002	REV T
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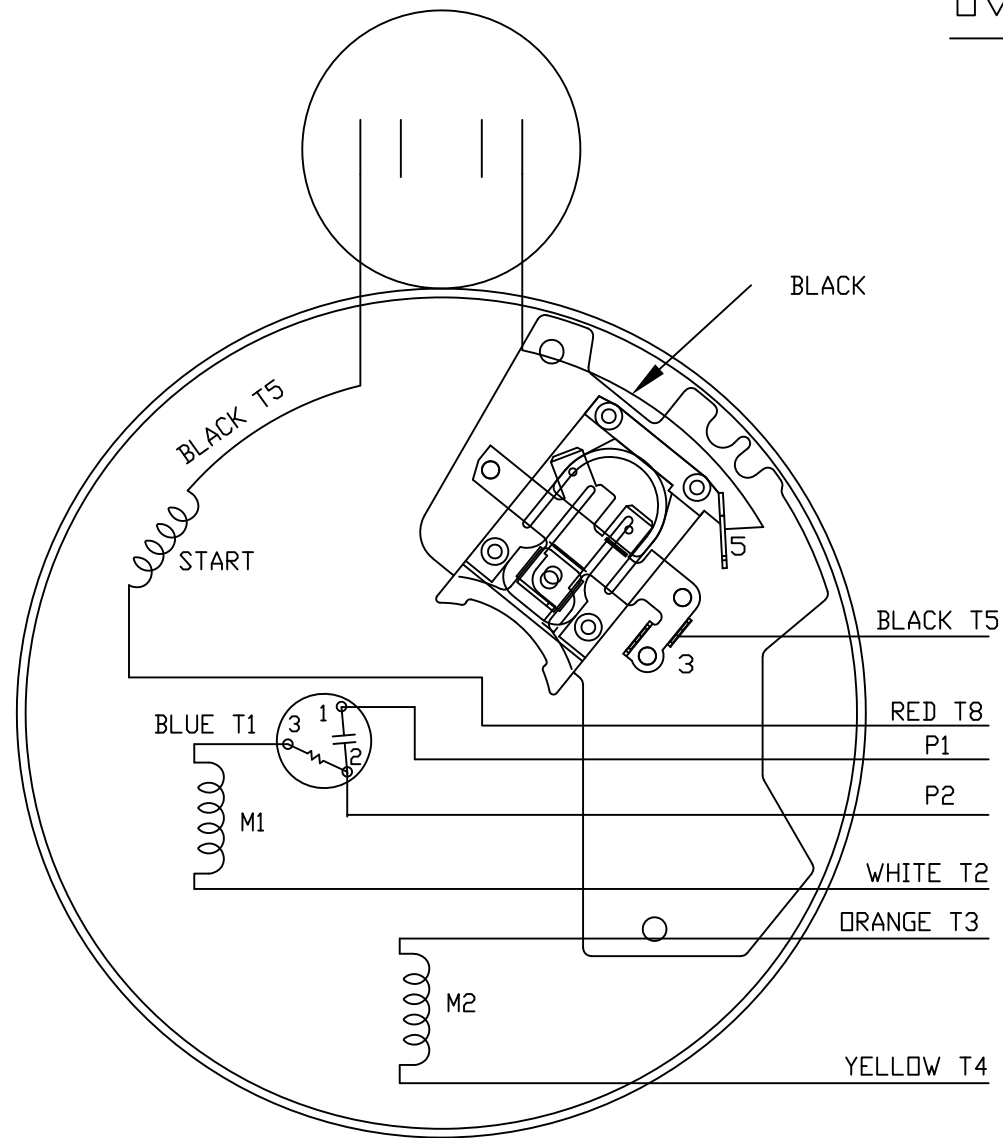
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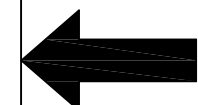
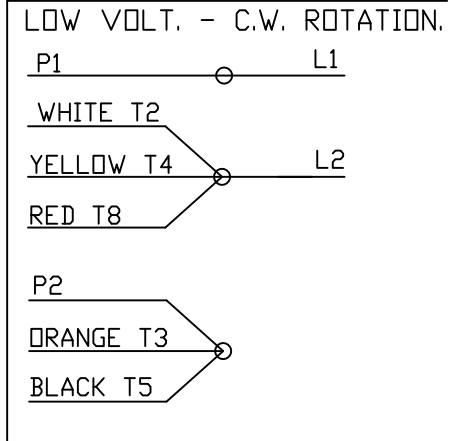


THERMALLY PROTECTED

DUAL VOLTAGE  
CAPACITOR START  
OVERLOAD SELECT ROT.



NORMAL ROTATION FOR GM IS C.W.



CAUTION:  
FOR GREEN MACHINE WIRING MOTOR  
REPLACEMENT.

		TOLERANCES UNLESS SPECIFIED		ELECTRIC MOTORS GEARMOTORS AND DRIVES		DRAWN	
		DEC.	INCHES			CHK	
		.X	±.1			APPD	
		.XX	±.02	TITLE CONNECTION DIAGRAM		SCALE 5=8	
		.XXX	±.005			REF	
		.XXXX	±.0005	ITEM #4S FOR CS8A AND CS12A GREEN MACHINES ONLY		YMF	
NO.	REVISION	BY & DATE	CHK	ANG	FINISH	PREV	
			RFP	CAD FILE		SIZE	DRAWING NO. PAGE OF REV.
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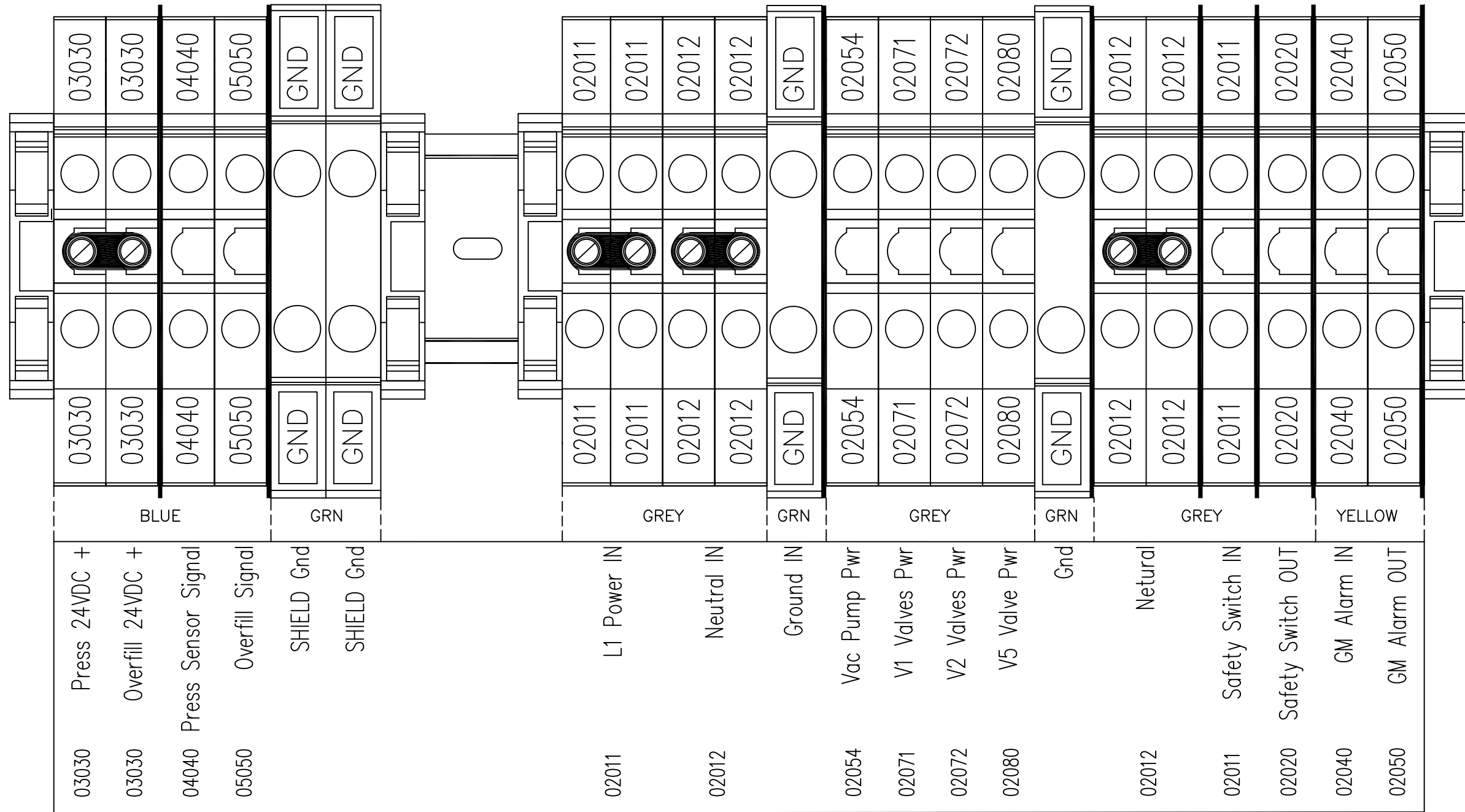
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FILENAME: 5790-002 TITLE: GREEN MACHINE - GEN 3 SCALE: N/A

# CONTROL PANEL WIRING CONNECTIONS



## FIELD WIRING CONNECTIONS

NOTE:

1. ITEM IS FOR CS8A AND CS12A GREEN MACHINES ONLY.

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APPROVED BY G. WALKER	DATE 08/23/24		3RD ANGLE PROJECTION	SHEET NO. 10 OF 10